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Date: //-/3-07

Himanehu S. Amin

Examiner: P. Nguyen

Art Unit: 2632

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicant(s): Saeed Shafiyan-Rad, et al.

Serial No: 09/590,922

Filing Date: June 9, 2000

Title:

MULTI-ANGLE VIEWABLE INDICATOR APPARTUS

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Technology Center 2600

SUPPLEMENTAL APPEAL BRIEF

Dear Sir:

Applicant submits this supplemental appeal brief in connection with a request for reinstatement of the appeal of the above-identified application.

I. Real Party in Interest (37 C.F.R. § 1.192(c)(1))

The real party in interest in the present appeal is Rockwell Technologies, LLC, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. § 1.192(c)(2))

Appellant, appellant's legal representatives, and/or the assignee of the present application are unaware of any appeals or interferences which will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. § 1.192(c)(3))

Claims 1-5, 10-14, and 19-21 are pending in the application. The rejection of claims 1-5, 10-14, and 19-21 is appealed.

IV. Status of Amendments (37 C.F.R. § 1.192(c)(4))

No claim amendments have been made subsequent to the final rejection of November 6, 2001.

V. Summary of Invention (37 C.F.R. § 1.192(c)(5))

The present invention relates to an indicator apparatus having one or more indicators that are viewable from multiple directions. The indicator apparatus includes a housing with an outer sidewall portion, in which one or more slots extend through (p. 4, 1l. 25-30). For example, the one or more slots extend completely through a part of the housing adjacent to a top side thereof. That is, the one or more slots extend from one side through the sidewall to the opposed side, intersecting the top side (p. 5, 1l. 1-3). Thus, the one or more slots are exposed at the top side surface as well as at the opposed side surfaces (p. 5, 1l. 10-11).

If more than one slot is present, each slot is separated from an adjacent slot by a substantially opaque partition. The partitions extend coextensively between the sides and with each adjacent pair of slots (p. 5, ll. 3-6) and can be integral with the housing (p. 7, ll. 18-20).

A light source is associated with each respective slot. Each light source, which may be an LED, protrudes from the housing into its corresponding slot, but is recessed relative to the outer surface of the sidewall (p. 5, 1l. 23-26). Each light source may indicate a different operating condition of the indicator apparatus (p. 5, 1l. 29-30).

A length (or strip) of a substantially translucent material is disposed within each respective slot and is dimensioned and configured according to the dimensions and

configurations of the corresponding slot (p. 6, ll. 11-15). The strip provides a suitable medium for transmitting light emitted from each associated light source (p. 6, ll. 28-29).

As a light source is activated to emit light, the associated strip is illuminated and the illuminated strip is visible from a plurality of viewing angles. In particular, the illumination of each strip is visible from the top side of the housing and from the side surfaces that the strip intersects (p. 8, ll. 17-21).

The indicator apparatus can also include a proximity sensing system. The proximity sensing system includes a connector with a plurality of pins for receiving power and/or providing output signals indicative of one or more operating conditions of the system and one or more sensing probes or sensors (p. 8, ll. 1-6). Electronics are contained within the housing to monitor an oscillating signal at the probes in order to determine a proximity of a target relative to the probes. One or more of the light sources may be activated according to the condition at each sensor probe and/or other operating conditions of the proximity sensing system (p. 8, ll. 10-16; p. 9, ll. 19-p. 10, ll. 3).

VI. Statement of the Issues (37 C.F.R. § 1.192(c)(6))

- A. Whether claims 1, 2, 4, 5, 10, 11, 13, 14, 19, and 20 are patentable under 35 U.S.C. §102(b) over U.S. Patent No. 4,082,934 to Piber (the "Piber patent").
- B. Whether claims 3 and 12 are patentable under 35 U.S.C. §103(a) over the Piber patent in view of U.S. Patent No. 3,711,669 to Keranen (the "Keranen patent").
- C. Whether claim 21 is patentable under 35 U.S.C. §103(a) over the Piber patent in view of U.S. Patent Des. 391,182 to Schneider *et al.* (the "Schneider patent").

VII. Grouping of Claims (37 C.F.R. § 1.192(c)(7))

For the purposes of this appeal only, the claims are grouped as follows:

Claims 1, 2, 10, 11, 19, and 20 stand or fall together; claims 3 and 12 stand or fall together; claims 4, 5, 13, and 14 stand or fall together; and claim 21 stands or falls alone.

VIII. Argument (37 C.F.R. § 1.192(c)(8))

A. Rejection of Claims 1, 2, 4, 5, 10, 11, 13, 14, 19, and 20 Under 35 U.S.C. §102(b)

Claims 1, 2, 4, 5, 10, 11, 13, 14, 19, and 20 stand rejected under 35 U.S.C. 102(b) as being anticipated by Piber (U.S. Pat. 4,082,934). A reversal of the rejection is respectfully requested for at least the following reasons.

Applicable Law

"For a prior art reference to anticipate in terms of 35 U.S.C. §102, every element of the claimed invention must be identically shown in a single reference." In re Bond, 910 F.2d 831, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990) (quoting Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 677 & USPQ2d 1315, 1317 (Fed. Cir. 1988)). See Also In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999)(quoting Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987)). In other words, anticipation exists only if all the elements of the claimed invention are present in a product or process disclosed, expressly or inherently, in a single prior art reference. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 221 USPQ 385 (Fed. Cir. 1984), cert. dismissed sub nom. Hazeltine Corp. v. RCACorp., 468 U.S. 1228 (1984); see also, MPEP §706.02. In addition, in order to anticipate the elements in a single reference "must be arranged as in the claim under review." Id., (quoting Lindemann Maschinenfabrik v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984)). Finally, "in deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference. Lindemann Maschinenfabrik, 730 F.2d at 1458.

i. The Piber patent fails to disclose at least one elongated strip of substantially translucent material extending through a first side and at least one of second and third sides so that part of the strip is visible at the first side and the at least one of the second and third sides through which the strip extends, as recited in claim 1.

Piber does not disclose at least one elongated strip of substantially translucent material extending through a first side and at least one of second and third sides so that part of the strip is visible at the first side and the at least one of the second and third sides through which the strip

extends, as recited in claim 1. Instead, Piber teaches an insert that *extends through a single end* of a flattened tunnel, which extends longitudinally vertically through an operating handle. The insert projects beyond the outer end of the handle such that the head portion of the insert forms the outer tip of the handle. The inner flat end of the insert, although it projects beyond the tunnel at the other end, remains in the interior of the housing. Col. 3, lines 19-42. Thus, as shown in Figs. 2 and 4 of the Piber patent, the insert extends through one end of a tunnel formed in a handle, but does not extend through at least two different sides of the housing so as be visible from the at least two different sides through which it also extends.

The Advisory Action dated February 12, 2002, contends that Piber shows "at least one elongated strip of substantially translucent material extending through the first side 34 and at least one of the second side 34e of the housing." Applicants respectfully disagree. The reference numerals 34 and 34e cited in the Action do not refer to sides of the handle, but rather to the insert itself (see Fig. 5 of Piber). Furthermore, although the insert in Piber is visible from at least two sides of the handle, the insert does not extend through the sides from which it is visible. Instead, the insert is also configured such that it forms a tip of the handle as illustrated in Fig. 4 of Piber.

Assuming arguendo that the ends of the tunnel are considered a first and second side of the housing, the insert is only visible at the first side. The second side terminates inside the handle; and although the insert extends through the tunnel, this end of the insert remains in the interior of the operating handle and thus, is not visible.

Because the Piber patent does not disclose every element of the claimed invention and every structural and functional feature of claim 1, claim 1 is not anticipated by the Piber patent. Claims 2-10 depend directly or indirectly from independent claim 1. Accordingly, a reversal of the rejection of claims 1-10 is respectfully requested.

ii. The Piber patent fails to disclose at least one elongated strip which extends completely through the housing from a second side to a third side and is exposed at the first side, whereby the at least one elongated strip is visible along the first side, second side, and third side, as recited in claims 4 and 13.

With respect to claims 4 and 13, Piber does not disclose at least one elongated strip which extends completely through the housing from the second side through to the third side and is

exposed at the first side, whereby the at least one elongated strip is visible along the first side, the second side, and the third side. Rather, Piber teaches an insert which extends through one end of a tunnel within an operating handle. Assuming *arguendo* that the ends of the tunnel are considered a first and second side of the housing, the insert is only visible at the first side. The second side terminates inside the handle; and although the insert extends through two ends of the tunnel, one end of the insert remains in the interior of the operating handle and thus, is not visible. As stated above, although the insert taught in Piber is visible from first, second, and third sides of the handle, the insert does not extend through these sides, as recited in claims 4 and 13. Instead, in Piber, the insert merely sits on top of the handle, such that it forms a tip at the end of the handle.

Because the Piber patent does not disclose every structural and functional feature of claims 4 and 13, claims 4 and 13 are not anticipated by the Piber patent. Claims 5 and 14 respectively depend from claims 4 and 13. Accordingly, a reversal of the rejection of claims 4, 5, 13, and 14 is respectfully requested.

iii. The Piber patent fails to disclose an elongated slot formed in a housing extending through the first and at least one of the second and third sides of the housing, and a substantially translucent material being disposed in the slot and being visible at the first side and the at least one of the second and third sides, as recited in claim 11.

Regarding claim 11, Piber does not disclose an elongated slot formed in a housing extending through at least two sides of the housing, and a substantially translucent material being disposed in the slot and being visible at the at least two sides. Although Piber describes a tunnel formed within an operating handle and an insert extending through the tunnel, the insert only extends through a first side from which it is visible. The insert is not visible at the second side of the tunnel through which it extends, as the second side is disposed within the interior of the handle.

Because the Piber patent does not disclose every structural and functional feature of claim 11, claim 11 is not anticipated by the Piber patent. Claims 12-19 depend directly or indirectly from claim 11. Accordingly, a reversal of the rejection of claims 11-19 is respectfully requested.

iv. The Piber patent fails to disclose substantially translucent means extending through a plurality of sides of a sidewall portion of housing means for transmitting emitted light from illumination means so as to be visible from the plurality of sides of the housing, as recited in claim 20.

Claim 20 recites translucent means that extends through a plurality of sides of a sidewall of housing means such that emitted light from illumination means is visible from the plurality of sides. Piber does not disclose these elements similar to the reasons stated above with respect to claims 1, 4, and 11. Although in Piber emitted light is visible from a plurality of sides of the handle, the insert does not also *extend through* the plurality of sides from which the light is visible.

Because the Piber patent does not disclose every structural and functional feature recited in claim 20, claim 20 is not anticipated by the Piber patent. Accordingly, a reversal of the rejection of claim 20 is respectfully requested.

B. Rejection of Claims 3 and 12 Under 35 U.S.C. §103(a)

Claims 3 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Piber in view of Keranen (U.S. Pat. 3,711,669). A reversal of the rejection is respectfully requested for at least the following reasons.

i. Neither the Piber patent nor Keranen patent, alone or in combination, teach or suggest the indicator apparatus of claim 1, wherein the light source has an illuminated condition and nonilluminated condition, each condition being indicative of an operating condition of the indicator apparatus, as recited in claims 3 and 12.

Piber is directed to illuminated electric switches having a pivotal operating handle, such as tab switches, toggle lever switches, rocker switches, etc. Specifically, Piber discloses a handle that includes an insert that *extends through a single end* of a flattened tunnel, which extends longitudinally vertically through the operating handle. The insert projects beyond the outer end of the handle such that the head portion of the insert forms the outer tip of the handle. The inner flat end of the insert, although it projects beyond the tunnel at the other end, remains in the interior of the housing so as not to be visible at such other end.

Keranen is directed to a switch having a lamp inside its toggle lever to serve as an indicator of the operating condition. However, like Piber, Keranen fails to disclose, teach or otherwise suggest a housing that includes at least one elongated strip of substantially translucent material *extending through* the first side *and* at least one of the second and third sides so that part of the strip is visible at the first side and the at least one of the second and third sides.

Instead, Keranen teaches a lamp bulb 16 located within a hollow handle 14. The handle 14 is made of a translucent material, such that the handle 14 can transmit light from the lamp bulb 16. Thus, the translucent handle 14 of Keranen is the housing of the switch.

Accordingly, the proposed combination of Piber and Keranen would not result in the subject matter recited in claims 3 and 12. In particular, neither Piber nor Keranen provides a teaching of at least one elongated strip of substantially translucent material extending through the first side and the second and/or third sides of a housing so that part of the strip is visible at the first side and the second and/or third sides and where an associated light source has illuminated and non-illuminated condition corresponding to an operating condition of the indicator apparatus.

Therefore, claims 3 and 12 are non-obvious over Piber and Keranen, taken individually or in combination. Accordingly, a reversal of the rejection of claims 3 and 12 are respectfully requested.

C. Rejection of Claim 21 Under 35 U.S.C. §103(a)

Claim 21 stands rejected under 35 U.S.C. as being unpatentable over Piber in view of Schneider *et al.* (U.S. Pat. Des. 391,182). A reversal of the rejection is respectfully requested for at least the following reasons.

i. Both the Piber patent and the Schneider patent, alone and in combination, fail to teach or suggest at least one elongated strip of substantially translucent material extending through at least one side of a sidewall portion through to another side of the sidewall portion so that part of the strip is visible at the at least one side and the another side of the sidewall portion; and a light source operatively associated with the at least one elongated strip, the light source being operative to, when activated, illuminate the elongated strip, the light source being activated based on an operating condition of a proximity sensor system, as recited in claim 21.

Piber does not disclose at least one elongated strip of substantially translucent material extending through at least one side of a sidewall portion through to another side of the sidewall portion so that part of the strip is visible at the at least one side and the another side of the sidewall portion, as recited in claim 21. Instead, Piber teaches an insert that extends through a single end of a flattened tunnel, which extends longitudinally vertically through an operating handle. The insert projects beyond the outer end of the handle such that the head portion of the insert forms the outer tip of the handle. The inner flat end of the insert, although it projects beyond the tunnel at the other end, remains in the interior of the housing. Col. 3, lines 19-42. Thus, as shown in Figs. 2 and 4 of Piber, the insert extends through one end of a tunnel formed in a handle, but does not extend through at least one side of a sidewall portion through to another side of the sidewall portion. Furthermore, although the insert in Piber is visible from at least two sides of the handle, the insert does not extend through the sides from which it is visible. Instead, the insert is also configured such that it forms a tip of the handle as illustrated in Fig. 4 of Piber.

Schneider does not make up for the aforementioned deficiencies noted with respect to Piber. The Schneider patent is directed to a proximity sensor and does not disclose, teach, or otherwise suggest, at least one elongated strip of substantially translucent material extending through at least one side of a sidewall portion through to another side of the sidewall portion so that part of the strip is visible at the at least one side and the another side of the sidewall portion, as recited in claim 21. Instead, such elements are absent from Schneider.

Moreover, the Piber patent and the Schneider patent cannot be combined to make claim 21 obvious because there is not proper motivation to combine the teachings of Piber with the teachings of Schneider. "There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). The Piber patent is directed to illuminated electric switches and the problems associated with such switches, such as the intensity of the illumination, the difficulties of relamping, and interchangeability of the operating handle. Thus, Piber does not refer to any problem that would have suggested to one of ordinary skill in the art to use a proximity switch in combination with the illuminated electric switch of Piber. Likewise,

the teachings of the Piber patent would not have suggested to one of ordinary skill in the art to use a proximity switch in combination with the illuminated electric switch, as taught in Piber.

The Office Action of November 6, 2001, states that "the use of proximity sensor is old and well known in the art as taught by Schneider *et al.* Therefore, it would have been obvious to one of ordinary skill in the art to use the teaching of Schneider *et al.* in the system of Piber for detecting the presence or absence of an object." However, the Office Action failed to set forth particular findings tosupport this conclusion, which showing must be clear and particular. *C.R. Bard, Inc v. M3 Systems, Inc*, 157 F.3d 1340, 48 USPQ2d 1225 (Fed. Cir. 1998). Also, broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." In re Dembiczak, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999) (*citing*, *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993)). Moreover, as stated in *Okajima v. Bourdeau*, 261 F.3d 1350, 59 USPQ2d 1795 (Fed. Cir. 2001):

The level of skill in the art is a prism or lens through which a judge, jury, or the Board of Patent Appeals and Interferences views the prior art and the claimed invention. This reference point prevents these factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness. Skill in the art does not act as a bridge over gaps in substantive presentation of an obviousness case, but instead supplies an important guarantee of objectivity in the process.

It is respectfully submitted that the Office has not provided or demonstrated a line of reasoning to show that there is proper motivation to make the suggested combination. Piber is directed to illuminated electric switches having a pivotal operating handle, such a tab switches, toggle lever switches, rocker switches, etc. Such switches are not concerned with detecting the presence or absence of an object, as contended by in the Office Action. In contrast, Schneider *et al.* is a design patent depicting a particular ornamental design of a proximity sensor having what appear to be light emitting diodes (LEDs) protruding from a chamfered corner of the sensor. Schneider *et al.* includes no moveable handle or switch. Accordingly, it appears that the purported combination of references is based on improper hindsight, in which the present application provides the teaching and motivation to do so.

Furthermore, it is submitted that the proffered combination of Piber and Schneider et al.

does not yield the subject recited in claim 21. Specifically, these references, taken individually or in combination, contain no teaching or suggestion of at least one elongated strip of substantially translucent material that extends through at least one side of sidewall portion an indicator housing and through to another side of the sidewall portion of the housing so that part of the strip is visible at the at least one side and the another side of the sidewall portion.

Moreover, these references contain no teaching or suggestions of a light source operatively associated with the at least one elongated strip, the light source being operative to, when activated, illuminate the elongated strip, the light source being activated based on an operating condition of a proximity sensor system. Because such teachings are absent, any combination of such references cannot create the subject matter recited in claim 21.

For the aforementioned reasons, claim 21 is non-obvious over Piber and Schneider *et al.*, taken individually or in combination. Accordingly, a reversal of the rejection of claim 21 is respectfully requested.

IX. Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-5, 10-14, and 19-21 be reversed.

Respectfully submitted, AMIN & TUROCY, LLP

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X. Appendix of Claims (37 C.F.R. § 1.192(c)(9))

- An indicator apparatus, comprising:

 a housing having a first side extending generally between second and third sides; and at least one elongated strip of substantially translucent material extending through the first side and at least one of the second and third sides so that part of the strip is visible at the first side and the at least one of the second and third sides.
- 2. The indicator apparatus of claim 1, further including a light source operatively associated with the at least one elongated strip so that light from the light source illuminates the at least one elongated strip.
- 3. The indicator apparatus of claim 1, wherein the light source has an illuminated condition and non-illuminated condition, each condition being indicative of an operating condition of the indicator apparatus.
- 4. The indicator apparatus of claim 1, wherein the at least one elongated strip extends completely through the housing from the second side through to the third side and is exposed at the first side, whereby the at least one elongated strip is visible along the first side, the second side, and the third side.
- 5. The indicator apparatus of claim 4, wherein the second and third sides are opposed sides of the housing.
- 6. The indicator apparatus of claim 1, wherein the at least one elongated strip further includes at least two elongated strips of the substantially translucent material, each of the at least two elongated strips extending through the first side and at least one of the second and third sides so that part of each of the elongated strips is visible at the first side and the at least one of the second and third sides, a partition of a substantially opaque material separating the at least two elongated strips.

7. The indicator apparatus of claim 6, further including a different light source operatively associated with each of the at least two elongated strips so that light from each light source illuminates a corresponding one the at least two elongated strips.

- 8. The indicator apparatus of claim 7, wherein each of the at least two elongated strips extends completely through the housing from the second side through to the third side and is exposed at the first side.
- 9. The indicator apparatus of claim 8, wherein the second and third sides are opposed sides of the housing.
- 10. The indicator apparatus of claim 1, wherein the at least one elongated strip has an outer extent that substantially conforms to the contour of an adjacent outer sidewall portion of the housing.
 - 11. An indicator system, comprising:

a housing having a first side extending between second and third sides, at least one elongated slot formed in the housing extending through the first side and at least one of the second and third sides; and

a substantially translucent material being disposed in the slot adjacent a light source that is operative to, when activated, illuminate the translucent material, the translucent material being visible at the first side and the at least one of the second and third sides.

12. The indicator system of claim 11, wherein the light source has an illuminated condition and non-illuminated condition, each condition being indicative of an operating condition of the indicator system.

13. The indicator system of claim 11, wherein the at least one elongated slot extends completely through the housing from the second side through to the third side and provides an opening along the first side, whereby the substantially translucent material is visible at the first

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sides of the housing.

side, the second side, and the third side.

- 14. The indicator system of claim 13, wherein the second and third sides are opposed
- 15. The indicator system of claim 11, wherein the at least one elongated slot further comprises at least two elongated slots extending through the first side and at least one of the second and third sides, a partition of a substantially opaque separating the at least two elongated slots, translucent material being disposed in each of the at least two elongated slots so that the translucent material is visible at the first side and the at least one of the second and third sides.
- 16. The indicator system of claim 15, further including a different light source operatively associated with each of the at least two elongated strips so that light from each light source illuminates the translucent material in a corresponding one the at least two elongated slots.
- 17. The indicator system of claim 16, wherein each of the at least two elongated slots extends completely through the housing from the second side through to the third side and provides an opening along the first side.
- 18. The indicator system of claim 17, wherein the second and third sides are opposed sides of the housing.
- 19. The indicator apparatus of claim 11, wherein the at least one elongated strip has an outer extent that substantially conforms to the contour of an adjacent outer sidewall portion of the housing.

20. An indicator apparatus, comprising:

housing means having an outer sidewall portion;

illumination means for, when activated, emitting light; and

substantially translucent means extending through a plurality of sides of the sidewall portion of the housing means for transmitting emitted light from the illumination means so as to be visible from the plurality of sides of the outer sidewall portion of the housing.

21. A proximity sensor system, comprising:

a proximity sensor for sensing the proximity of an object;

an indicator housing having an outer sidewall portion with a plurality of sides;

at least one elongated strip of substantially translucent material extending through at least one side of the sidewall portion through to another side of the sidewall portion so that part of the strip is visible at the at least one side and the another side of the sidewall portion; and

a light source operatively associated with the at least one elongated strip, the light source being operative to, when activated, illuminate the elongated strip, the light source being activated based on an operating condition of the proximity sensor system.